

IN THE CLAIMS

1. (Presently and Previously Amended) A method for controlling a data stream comprising the steps of:
- at a node in a network, intercepting a request signal transmitted from a request signal source to a host computer having a corresponding host destination address, the request signal including the host destination address to support transmission of the request signal to the host computer, the request signal originally destined intended for receipt by a host the host computer that would otherwise respond with control information for controlling a manner in which the request signal source transfers the data stream;
- from the node intercepting the request signal:
- generating a control signal in response to intercepting the request signal, the control signal including the control information for controlling the manner in which the request signal source transfers the data stream; and
- providing the control signal to the request signal source to individually control the manner in which the request signal source transfers the data stream among multiple data streams transferred by the request signal source.
2. (Presently Amended) The method of claim 1 wherein the request signal source is a routing data communications mechanism operating within a the data communications device.
3. (Original) The method of claim 1 wherein the step of generating the control signal includes the steps of:
- forming the control signal without communicating with the host computer in response to request signal.

4. (Original) The method of claim 1 wherein the data stream is a ReSerVation Protocol session, and wherein the control information of the control signal includes ReSerVation Protocol instructions.
5. (Original) The method of claim 1 wherein the data stream is a multicast session, and wherein the control information of the control signal includes Internet Group Management Protocol instructions.
6. (Original) The method of claim 1, further comprising the step of:
performing an operation that decides whether to contact the host computer for assistance in response to the request signal, a result of the operation directing the data communications device not to contact the host computer in response to the request signal.
7. (Original) The method of claim 1 wherein data within the data stream indicates that the host computer is an originator of the data stream.
8. (Presently Amended) The method of claim 1 wherein data within the request signal indicates that the host computer is a destined ~~an intended~~ recipient of the request signal.
9. (Previously Amended) The method of claim 1 wherein the request signal is an interprocess communication signal, and wherein the step of intercepting the request signal includes the step of:
obtaining, by a host agent operating within the data communications device and acting on behalf of the host computer, the request signal from the request signal source through an interprocess communication interface of the host agent.

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10. (Presently and Previously Amended) A data communications device comprising:

multiple network ports;

memory that stores an application; and

a controller coupled to the multiple network ports and the memory, an agent process running on the controller when the controller operates in accordance with the application stored in the memory such that the agent:

intercepts ~~receives~~ a request signal transmitted from a request signal source to a host computer having a corresponding host destination address, the request signal including the host destination address of the host computer, the request signal originally otherwise intended destined for receipt by the a-host computer that would respond with control information for controlling a manner in which the request signal source transfers a data stream;

^{originates}
~~generates~~ a control signal in response to receiving the request signal, the control signal including the control information for controlling the manner in which the request signal source transfers the data stream; and

provides the control signal to the request signal source to individually control the manner in which the request signal source transfers the data stream among multiple data streams transferred by the request signal source.

11. (Original) The data communications device of claim 10 wherein the request signal source is a data communications mechanism operating within the data communications device.

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(Original) The data communications device of claim 10 wherein the agent forms the control signal without communicating with the host computer in response to request signal when the agent generates the control signal.

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(Original) The data communications device of claim 10 wherein the data stream is a ReSerVation Protocol session, and wherein the control information of the control signal includes ReSerVation Protocol instructions.

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(Original) The data communications device of claim 10 wherein the data stream is a multicast session, and wherein the control information of the control signal includes Internet Group Management Protocol instructions.

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(Original) The data communications device of claim 10 wherein the agent further performs an operation that decides whether to contact the host computer for assistance in response to the request signal, a result of the operation directing the data communications device not to contact the host computer in response to the request signal.

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(Original) The data communications device of claim 10 wherein data within the data stream indicates that the host computer is an originator of the data stream.

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(Presently Amended) The data communications device of claim 10 wherein data within the request signal indicates that the host computer is a destined ~~an intended~~ recipient of the request signal.

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(Original) The data communications device of claim 10 wherein the request signal is an interprocess communication signal, and wherein the host agent receives the request signal from the request signal source

through an interprocess communication interface of the host agent when acting on behalf of the host computer.

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10. (Presently and Previously Amended) A computer program product that includes a computer readable medium having instructions stored thereon for controlling a data stream, such that the instructions, when processed by a controller, cause the controller to perform the steps of:

intercepting a request signal transmitted from a request signal source to a host computer having a corresponding host destination address, the request signal including the host destination address to support transmission of the request signal to the host computer, the request signal originally destined intended for the a host computer that would otherwise respond with control information for controlling a manner in which the request signal source transfers the data stream;

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originating
generating
a control signal in response to intercepting the request signal, the control signal including the control information for controlling the manner in which the request signal source transfers the data stream; and

providing the control signal to the request signal source to individually control the manner in which the request signal source transfers the data stream among multiple data streams transferred by the request signal source.

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20. (Original) The computer program product of claim 13 wherein the request signal source is a data communications mechanism operating within the data communications device, and wherein the computer readable medium further includes instructions stored thereon for directing operation of the request signal source.

21. (Cancelled)

22. (Previously Amended) A method as in claim 1, wherein the step of intercepting a request signal includes:
receiving the request signal from the request signal source, the request signal source being disposed at an intermediate node of the network, the request signal source routing the data stream from the host computer to a recipient computer.

23. (Previously Added) A method as in claim 1, wherein the step of intercepting a request signal includes:
receiving the request signal at an intermediate node of the network other than a node of the request signal source.

24. (Previously Added) A data communications device as in claim 10, wherein the request signal source is disposed at an intermediate node of the network and the request signal source routes the data stream from the host computer to a recipient computer.

25. (Previously Added) A data communications device as in claim 10, wherein the controller running the agent process is disposed at an intermediate node of the network other than that of the request signal source.

26. (Previously Added) A data communications device as in claim 25, wherein the request signal travels along a path from the request signal source to the controller exclusive of a path associated with the data stream.

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(New) A method for controlling transmission of a data stream through a network, the method comprising:

at least partially supporting transmission of the data stream from a data stream source to a data stream recipient via a routing mechanism disposed at a network ^{communications device} ~~node~~ between the data stream source and data stream recipient, the routing mechanism supporting transmission of the data stream based, at least in part, on received control information;

providing a software agent at the network ^{communications} ~~node~~;

via the software agent, intercepting a request signal transmitted from the routing mechanism to a remote host computer that, if the request signal was otherwise received by the remote host computer, would respond with control information for controlling a manner in which the routing mechanism transfers the data stream;

from the software agent intercepting the request signal:

^{originating} ~~generating~~ a control signal in response to intercepting the request signal, the control signal including the control information for controlling the manner in which the routing mechanism transfers the data stream; and

providing the control signal including control information to the routing mechanism to control a manner in which the routing mechanism transfers the data stream from the data stream source ^{the} ~~to~~ data stream recipient.

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(New) A method as in claim ¹³ ~~27~~, wherein intercepting a request signal includes:

intercepting the request signal originally destined for receipt by the remote host computer, the remote host computer being the data stream recipient that receives the data stream.

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~~29.~~¹³
(New) A method as in claim ~~27~~, wherein intercepting a request signal includes:

intercepting the request signal originally destined for receipt by the remote host computer, the remote host computer being the data stream source that transmits the data stream.

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(New) A method as in claim ~~29~~, wherein intercepting the request signal includes:

intercepting the request signal which includes a request for permission to drop data packets associated with the data stream, the software agent responding to the request for permission to drop data packets received from the routing mechanism on behalf of and instead of the data stream source.

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(New) A method as in claim ~~30~~ further comprising:

at the software agent, receiving configuration information from the remote host computer indicating when it is acceptable to drop data packets of the data stream; and

at the software agent, utilizing the received configuration information from the remote host computer to provide control information to the routing mechanism how to transfer the data stream.

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(New) A method as in claim ~~31~~ further comprising:

in response to the routing mechanism dropping data packets of the data stream, generating and transmitting a message from the software agent to the remote host computer indicating when data packets of the data stream have been dropped.

33. (New) A method as in claim 1, wherein intercepting a request signal includes:
- intercepting the request signal originally destined for receipt by the host computer, the host computer being a data stream source that transmits the data stream.
34. (New) A method as in claim 33, wherein intercepting the request signal includes:
- intercepting the request signal which includes a request for permission to drop data packets associated with the data stream, the network node responding to the request for permission to drop data packets on behalf of and instead of the data stream source.
35. (New) A method as in claim 34 further comprising:
- at the network node, receiving configuration information from the host computer indicating when it is acceptable to drop data packets of the data stream; and
- at the network node, utilizing the received configuration information from the host computer to provide control information to the request signal source how to transfer the data stream.
36. (New) A method as in claim 35 further comprising:
- in response to the request signal source dropping data packets of the data stream, generating and transmitting a message from the network node to the host computer indicating when data packets of the data stream have been dropped.

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